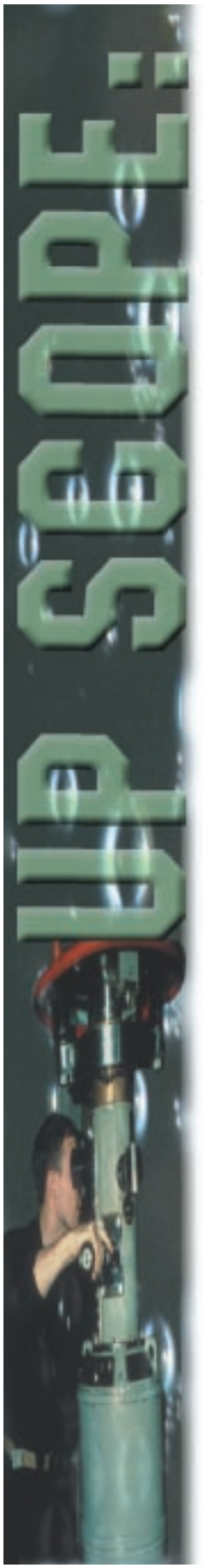


# What's a Range Guard?

*By MMCS(SS) Ron Downham, Naval Safety Center*

I ask the question, "What's a range guard?" because of what I've noticed in the submarine fleet regarding aqueous potassium carbonate (APC) range-guard systems and the poor PMS completion rate. The photos with this article clearly show some of these systems can be more of a fire hazard than a fire extinguisher.

Earlier this year, poorly maintained APC range-guard systems were identified as one of the submarine force's top-three damage-control deficiencies for 2001. This poor record is slowly climbing to the top of the damage-control deficiency list. Some systems have not seen PMS for two to three years—in one case almost nine years!

"How can this be?" you ask.

It is a case of expecting what you inspect, instead of inspecting what you expect. Incidentally, the PMS requirement is semi-annual.

Supervisors' periodic spot checks will make sure damage control petty officers have a working knowledge of the system and that the system will, in fact, function as it was designed should it be activated. This is important because most systems surveyed have multiple deficiencies that indicate a lack of system and PMS knowledge. Among the deficiencies are when the cable-travel in the scissors assembly is insufficient—a minimum of three inches is required—to activate the APC cylinder if needed; ventilation scissors-assemblies are missing or filthy (caked with dirt and grease); and ventilation systems contain debris such as plastic bags, paperwork, or cleaning rags. All such deficiencies pose fire hazards.

If you have any questions about your range-guard APC system or related PMS, contact me at the Naval Safety Center.

*The author's e-mail address is rdownham@safetycenter.navy.mil or he can be reached at (757) 444-3520 Ext. 7073 (DSN Prefix 564).*

This range-guard APC system's fusable link is covered with grease and dirt—obviously not having had any PMS done on it for quite a while—and poses a fire hazard.

Here you can see that the scissors assembly is missing—the assembly would activate the APC cylinder in case of a fire. With the assembly missing, the system is ineffective.